Support Economic Innovation

Implementation Action Area #1: Improve Data and Information Systems

Action	Lead	Specifics	Retain/Revise/
	Implementers	_	Complete/Delete
Evaluate the	State (DCEO,	The history and impacts of state	Revise
success of state	and other	programs and incentives for	
innovation	relevant state	economic development and	
programs and	agencies)	innovation should be evaluated.	
financial		Such an evaluation can inform the	
incentives		expansion or restoration of	
		successful programs, identify gaps	
		in existing programs, and improve	
		responsiveness to emerging	
		economic trends. There is evidence	
		that many of these state programs	
		have been quite successful these	
		successes need to be better	
		analyzed, documented, and	
		publicized to inform future state	
		policies and programs.	

Implementation Examples:

- CMAP is conducting research on the role of state and regional governments in planning for economic development opportunities. This includes best practices in economic development programs from around the country as well as how the region and state's current incentive programs can respond to new global dynamics.
- The Illinois Science and Technology Coalition is investigating state innovation programs focused on the biotech and health sciences cluster.

Rationale for Retain/Revise/Complete/Delete Assessment:

 Revisiting to broaden and encompass more economic development programs and incentives.

Action	Lead	Specifics	Retain/Revise/
	Implementers		Complete/Delete
Collect and analyze	CMAP, WBC,	Currently there is very limited	Revise
data relative to	IDES, ISTC	information about how innovations	
innovative business		translate into larger economic effects,	
starts and closures		such as jobs and business starts. CMAP	
in the region		and other regional entities should	
		measure the number of new innovation	
		start-up firms and jobs created. This will	
		provide the region with a means of	
		tracking emerging industries and	
		technologies, the growth in new firms, as	
		well as their longevity. This information	
		should also have useful research	
		consequences beyond the study of	
		innovation.	

- The <u>Illinois Innovation Index</u> measured start-ups as part of its assessment of the business climate. Data shows the number of startups by industry and how the Chicago region compares to our peer regions.
- Since 2011, Built in Chicago has been measuring the number of digital startups each quarter and compiles the totals in an annual report. The <u>quarterly and annual reports</u> also tract the funding raised by startups, number of jobs at startups, and the number of acquisitions.

Rationale for Retain/Revise/Complete/Delete Assessment:

• Revised slightly to update language and include other Lead Implementers.

Action	Lead	Specifics	Retain/Revise/
	Implementers		Complete/Delete
Collect and	CMAP, WBC,	CMAP and other regional partners	Revise
analyze other	Chicagoland	can serve a vital role as a central	
pertinent data	Chamber of	repository for the collection of data	
related to	Commerce,	related to innovation. CMAP	
innovation	Illinois	should also consider how to best	
outcomes	Science and	measure success through this data	
	Technology	other groups have created weighted	
	Coalition,	measures of a variety of variables	
	CMRC, IDES,	an "innovation index" which can	
	additional	work to measure future success.	
	outside		
	experts		

- In 2013 and 2014 CMAP has undertaken initial work to improve data and information systems related to human capital, a key recommendation of the plan. Going forward, CMAP will continue to provide more robust information related to human capital through its website. Staff will collect and analyze data related to economic trends, industry clusters, innovation, and workforce.
- From 2011 to 2013, CMAP collaborated with World Business Chicago, the Illinois Science and Technology Coalition, and the Chicagoland Chamber of Commerce to collect and analyze data on innovation through the Illinois Innovation Index. In its first year, the partners released a monthly newsletter examining a different innovation indicator, including exports, small business funding, patents, R&D funding, cluster trends, and several others. The group published an annual report compiling all the indicators in one document. In 2013, the group issued shorter monthly updates, and focused on more robust analysis in a quarterly newsletter. Each quarter focuses on a different theme: Capital, Dynamism, Business Climate, and Talent.

Rationale for Retain/Revise/Complete/Delete Assessment:

• Revised slightly to include additional Lead Implementers.

Action	Lead	Specifics	Retain/Revise/
	Implementers		Complete/Delete
Research and	State (DCEO),	The region needs to increase	Revise
redesign	Illinois	technology commercialization and	
technology	Science and	bridge the gap between the region's	
transfer	Technology	basic research assets and the private	
evaluation	Coalition,	market. There is some evidence that	
criteria	technology	innovators are changing their	
	transfer	products to be responsive to the	
	programs at	criteria by which technology transfer	
	universities	programs are judged. This is likely	
	and other	inefficient. Alternative metrics that	
	institutions	better reward commercialization of	
		new innovations should be	
		explored. Applied research should	
		be carried out by interviewing tech	
		transfer officials, scientists,	
		engineers, investors, and	
		manufacturers, and researching	
		other evaluation metrics.	

- CMAP published the freight cluster drill-down in 2012 and the manufacturing cluster drill-down in 2013. Together these analyses call attention to commercialization challenges between basic research and marketable products, and provide steps to increase technology transfer through increased private-sector participation in key technology specializations.
- Together with its partners, CMAP tracks technology transfer metrics and news as part of the Illinois Innovation Index. This includes technology licenses and revenue, academic patent output, and university start-ups.
- In its economic development work CMAP has called attention to the region and state's underperformance in the federal SBIR/STTR technology transfer programs, highlighting the need to better engage the region's numerous small-sized firms in commercialization activities. The Illinois Science and Technology Coalition has also undertaken work to improve small firm's technology transfer competitiveness through SBIR and STTR.

Rationale for Retain/Revise/Complete/Delete Assessment:

Revised slightly for clarity.

Action	Lead	Specifics	Retain/Revise/
	Implementers		Complete/Delete
Form coalitions	State (DCEO),	The region should use its various	Revise
around the	CMAP, local	clusters of regional specialization	
region's vital	governments,	as an overarching organizing	
industry clusters	nonprofits	framework for future coordination,	
to organize	(Chicagoland	collaboration, and proactive	
regional	Chamber,	initiatives, including organizing	
strategies and	CMC, MEGA,	around potential state and federal	
better position	World	funding. The region should	
the region to	Business	implement strategies to support	
compete in the	Chicago),	key clusters, such as the	
global	Chicago Fed,	recommendations identified in	
marketplace	workforce	CMAP's cluster drill-down reports	
	boards,	to foster innovation, meet	
	philanthropic	workforce needs, and prioritize	
	organizations	infrastructure investments.	
		Specifically, public/private	
		coalitions can develop strategies to	
		attract businesses and skilled	
		workers and articulate a common	
		regional direction.	

- An interstate coalition of universities, private firms, educators, public agencies, and civic
 organizations was established to garner federal support to expand the mega-region's
 innovation assets and grow the nation's second largest manufacturing cluster. In Illinois,
 efforts were coordinated through the Illinois Science and Technology Coalition and
 World Business Chicago; CMAP's Economic Development Committee was engaged in
 this process. In 2013, the coalition organized a mega-regional application for pending
 federal National Network for Manufacturing Innovation funding to build an innovation
 accelerator.
- In 2012, area community colleges received nearly \$13 million to scale up Harper College's advanced manufacturing training program to nearly 20 area colleges. The grant was the result of collaboration between the private sector, educators, and other stakeholders concerned with the need to enhance workers' skills for advanced manufacturing and grow the workforce to meet increased demand.
- City Colleges of Chicago has partnered with the private sector in its College to Career's
 reform initiative. Organizing around industries such as manufacturing and
 transportation, distribution, and logistics, the private sector has taken an active role in
 designing programs that will build skills are required in today's team-oriented,
 technology-saturated workplaces.

- Strategies are also underway to support the region's transportation and logistics companies. World Business Chicago's "Plan for Economic Growth and Jobs," prompted the development of several stakeholder-led groups to identify challenges and opportunities among the City and Region's key industries and growth areas. One such group, WBC's Transportation and Logistics Strategy Team, will help develop a strategy to elevate the Chicago region's status the nation's transportation and logistics hub, with goals to increase local business and jobs, and partner with universities and colleges to better target funding and build a workforce tailored to this industry.
- CMAP is involved with two efforts to better coordinate workforce funding and training.
 CMAP's Local Technical Assistance program is assisting the <u>Golden Corridor</u>
 <u>Manufacturing Group</u> to better coordinate industry partners and educators on addressing workforce needs of the I-90 manufacturing corridor. Additionally, CMAP is engaged with the Chicago Workforce Alliance Industry Partnerships which coordinates the workforce grant making for several area foundations and strategically engages and supports key industries.

Rationale for Retain/Revise/Complete/Delete Assessment:

• Revised to align more closely with CMAP's recent substantive research on industry clusters, and to broaden the specific actions beyond federal and state funding.

Action	Lead	Specifics	Retain/Revise/
	Implementers		Complete/Delete
Perform "drill	CMAP,	Industry clusters have been	Revise
down" analyses on	Chicago Fed,	researched extensively, but many	
established and	regional	gaps, practical linkages and	
emerging industry	leaders or	pertinent policy responses remain	
clusters	coalitions	poorly understood. CMAP	
	around	should continue developing drill-	
	industry	down analyses to understand key	
	clusters	drivers of the economy and how	
		the region can foster future	
		growth. Analyses will present	
		data specific to these clusters;	
		identify infrastructure, workforce,	
		and innovation needs; present	
		strategies for coordination and	
		communication; and make policy	
		recommendations. Future reports	
		should include sub-regional	
		analyses that examine a smaller	
		geography and unique	
		opportunities.	

- CMAP published the Freight Cluster Drill-Down in 2012 and the Manufacturing Cluster Drill-Down report in 2013. The reports define the cluster, examine recent trends, and consider the impact major national and international developments have on these clusters regionally. Using both quantitative data and information gathered through qualitative research and interviews, the reports include an analysis of the key challenges and opportunities regarding infrastructure, workforce, and innovation. The reports then describe priority areas and next steps to strengthen these clusters.
- Through late 2012 and early 2013, the Workforce Boards of Metropolitan Chicago in partnership with the Metro Economic Growth Alliance of Chicago (MEGA) have published reports on four industry clusters: Biomedical and Life Sciences; Business, Technical and Financial Services; Manufacturing; and Transportation and Logistics. These reports describe the clusters' key strengths, value chain, occupational opportunities, and market opportunities.
- The Illinois Science and Technology Coalition, with the Illinois Nanotech Collaborative and support from the U.S. Small Business Administration developed, "Illinois nanotechnology report: A roadmap for economic development." The research provided an overview of the region's cluster, its opportunities and challenges, analysis of other clusters around the country, and recommendations to harness the cluster's potential. In 2012, Metropolis Strategies, RW Ventures, and Innovation Network for Communities

released a study of emerging "green" market's opportunities for metropolitan Chicago. The study included an in depth report on the region's energy efficient lighting cluster.

Rationale for Retain/Revise/Complete/Delete Assessment:

 Revisions reflect the recent work completed by CMAP and partners on cluster analysis, as well as future plans to conduct subregional analyses.

Action	Lead	Specifics	Retain/Revise/
	Implementers	_	Complete/Delete
Reorient economic	State (DCEO,	State and regional economic	New
development	Governor,	development policies and	
strategies toward	General	practices should be reoriented to	
key drivers of	Assembly),	better compete in the highly	
regional economic	local	competitive global marketplace.	
vitality	governments,	Specifically, strategic plans should	
	economic	set clear investment priorities.	
	development	Programs and services should be	
	organizations	more coordinated and	
		streamlined to improve the	
		experience for businesses and	
		workers. Information and data	
		about these efforts should be	
		accessible and include	
		transparent, routine evaluation.	
		These actions will enable the state	
		and region to develop a more	
		outward-facing strategy to attract	
		and retain businesses and	
		workers, and compete nationally	
		and globally.	

Rationale for Retain/Revise/Complete/Delete Assessment:

• Propose addition based on recommendations in Drill-Down reports, upcoming CMAP analysis, and shifting attention towards these policy issues.

Implementation Action Area #3: Increase the Commercialization of Research, Target Investment Decisions, and Pursue New Financing Opportunities

Action	Lead	Specifics	Retain/Revise/
	Implementers		Complete/Delete
Bolster or	State (General	State elected officials should bolster or	Revise
reinstitute	Assembly,	reinstitute state programs with a track	
successful State	DCEO)	record of success in assisting	
programs which		entrepreneurs with critical business	
assist		startup and marketing needs, locating	
entrepreneurs		pre-seed and early stage financing,	
and create		furthering technical or managerial	
linkages		skills, and assisting with new product	
between		development and marketing. For	
researchers and		example, the state-funded programs	
the private		like IEN and ITEC provided	
sector		entrepreneurs with important	
		businesses development support to	
		put together documentation for	
		venture capital or "angel" investors,	
		apply for federal SBIR money, apply	
		for a patent, or put together a	
		business plan.	

Implementation Examples:

- The University of Illinois has released plans to open a research laboratory in Chicago that combines private funding with university expertise in key innovation areas. The lab will join basic research with real-world problems, creating a clear linkage between researchers and the private sector. The University of Illinois has also partnered with numerous public and private entities to organize the region around a National Network for Manufacturing Innovation center that would draw on the region's advanced manufacturing cluster.
- In addition to the proposed university labs, the State of Illinois is involved in several other partnerships supporting innovation. One example is the Joint Center for Energy Storage Research, a public-private partnership housed at Argonne National Laboratory focused on advancing battery technology and transferring these breakthroughs into the market through licensing.

Rationale for Retain/Revise/Complete/Delete Assessment:

• Revised to update references of programs and note importance of continued research into programmatic models.

Action	Lead	Specifics	Retain/Revise/
	Implementers		Complete/Delete
Re-institute the	State (General	Some version of the Innovation	Retain
Illinois	Assembly,	Challenge Matching Grant program	
Innovation	DCEO)	should be reinstated to provide	
Challenge		matching funding for federal SBIR	
Matching Grant		and STTR recipients. SBIR and	
program		STTR are federal programs funding	
		small businesses working with	
		universities.	

• The <u>Illinois Science and Technology Coalition</u> analyzed the need to incent and attract federal SBIR and STTR dollars to our state's economy. In 2012, Illinois businesses won 121 SBIR and STTR awards, totaling approximately \$41 million dollars, in early stage federal funding for feasibility (Phase I) and prototyping (Phase II) projects. ISTC reports that SBIR Phase I awards of up to \$150,000 make up the majority of awards whereas SBIR Phase II awards, which can be as high as a million dollars, account for over half of the total value of all awards.

Rationale for Retain/Revise/Complete/Delete Assessment:

• This continues to be a need as it will help increase the amount of federal funds awarded to companies in the state.

Action	Lead	Specifics	Retain/Revise/
	Implementers		Complete/Delete
Explore the	State	A new venture capital fund should	Retain
creation of a	(Governor's	be created to help investors and	
major new	office, DCEO),	entrepreneurs create and grow	
venture	the business	profitable businesses in the	
capital fund,	community, the	metropolitan Chicago region and	
at the regional	Federal Reserve	potentially beyond. The fund should	
or mega-	Bank of	be managed and operated by a	
regional level	Chicago,	private firm, but exploration should	
	nonprofits, I2A	be done first by government, civic	
	fund,	organizations, foundations, and the	
	philanthropic	private sector. The fund should be	
	organizations	targeted toward clusters of regional	
		specialization. A range of private	
		and public revenue sources should	
		contribute to such a fund, and	
		philanthropic organizations can play	
		a large role.	

- In 2012, DCEO launched the Invest Illinois Venture Fund, a new venture capital fund that seeks to support new, innovative companies that show high potential for growth. The fund is part of a larger \$78 million initiative called Advantage Illinois, which includes several funding options for small businesses. The funding came from an initiative within the federal Small Business Jobs Act signed into law in September 2010. With the program underway, State and regional stakeholders can track, analyze, and share the initiative's outcomes to inform improvements to this and future venture capital funds.
- Also launched in 2012, the FireStarter Fund is a group of Chicago based investors
 focused on supporting the digital technology field. The fund can make investments in
 companies throughout the U.S. but all the investors are based in Chicago so it is
 anticipated the investments will be concentrated in the Chicago area and upper
 Midwest.

Rationale for Retain/Revise/Complete/Delete Assessment:

• While both implementation examples work toward the Action, neither one fulfills it. Thus the recommendation is being retained.

Action	Lead	Specifics	Retain/Revise/
	Implementers		Complete/Delete
Implement a	Federal	Provide more incentives for	Revise
more robust	(Congress)	public/private collaboration around	
national		innovation. Provide federal funds	
innovation		that can be leveraged with private	
policy		resources. Provide competitive	
		funding for regional approaches	
		around specific industry clusters.	

- The federal government has launched several initiatives that signal a more robust approach to promoting innovation. Originally launched in 2010, the i6 challenge continues to grow and included a new competition in 2012. The program is funding six new partnerships with a \$1,000,000 grant to establish proof-of-concept centers to support innovators and researchers, expand access to capital, and connect entrepreneurs with the resources they need to grow. The initiatives were introduced through the administration's recent report, "A Strategy for American Innovation" which analyzed domestic advantages and challenges, identified technologies and industries poised for growth, and established priorities to foster innovation and long-term growth. The initiatives incentivize public/private collaboration around innovation, leverage private resources, and encourage regional approaches to support specific industry clusters.
- The Jobs and Innovation Accelerator Challenge brings together several federal agencies to support regional industry clusters. In 2012, the initiative focused on advanced manufacturing and emphasized the importance of public-private partnerships. A proposal from the region was submitted but was not successful. Ten projects were selected and each was awarded approximately \$2,000,000.
- Since the implementation of GO TO 2040, the America COMPETES Act of 2007 was reauthorized. The America COMPETES Act of 2010 is set to expire in 2013.

Rationale for Retain/Revise/Complete/Delete Assessment:

America COMPETES, a federal technology, research, and education act, was
reauthorized in 2010 with spending authorized for 2013. It generally funded existing
federal programs. A 2013 reauthorization act has not been passed. The specifics were
revised to focus less specifically on this legislation.

Action	Lead	Specifics	Retain/Revise/
	Implementers		Complete/Delete
Research,	State (DCEO),	Innovation success stories should be	Revise
compile, and	nonprofits	collected and publicized.	
publicize	(Chicagoland	Commonalities of these experiences	
examples of	Chamber, CMC,	should be emphasized, and the role	
successful	MEGA, World	of experimentation and perseverance	
innovation	Business	must be taught so that workers,	
	Chicago, ISTC)	entrepreneurs, and sources of	
	philanthropic,	funding see experimentation as an	
	private sector,	important stepping stone to	
	universities	innovation and growth.	

- Each year the Chicago Innovation Awards celebrates innovation in the region by recognizing the most innovative new products and services introduced and developed in metropolitan Chicago. Now in its 12th year, the award program provides many benefits—in addition to raising awareness on the innovative companies in the region, winners get access to publicity as well as training and mentoring opportunities.
- Techweek, Inc. holds a Chicago convenes entrepreneurs, researchers, and other innovation leaders through a week-long conference and expo.
- Formed by the Governor to foster innovation in the state, the Illinois Innovation Council
 promotes the role of innovation in economic growth, convenes academia, business and
 government, and recommends criteria to measure success. Created by the Council, the
 Illinois Innovation Network collects and publicizes innovation success stories on its
 website. The site features stories on innovative companies and identifies the
 commonalities of these experiences.
- Illinois Innovation Index investigates, compiles, and publicizes innovation metrics and news in the state and region. Each issue includes a "spotlight" highlighting an innovative company or other recent development that demonstrates the region's ability to foster innovation.

Rationale for Retain/Revise/Complete/Delete Assessment:

• Revised to include the Illinois Science and Technology Coalition as a lead implementer.

Action	Lead	Specifics	Retain/Revise/
	Implementers		Complete/Delete
Expand and link innovation related training	Implementers Nonprofit (Chicagoland Chamber, MEGA, World Business Chicago), universities	There are multiple meeting places, forums, and educational programs that support innovative thinking in the region. These programs should be expanded to reach wider audiences. Educational programs, conferences, and innovation competitions should also be linked so that budding innovators and investors can interact across fields and disciplines to share experiences	Revise
		and foster further innovative thinking.	

- Several organizations focus on supporting entrepreneurs involved in innovation and helping them thrive. <u>Chicago Innovation Mentors</u> provides innovation training to startups. The <u>Clean Energy Trust</u> offers business development support in clean energy startup. <u>Built In Chicago</u> also supports conferences and education in digital startup space. <u>1871</u> provides a space where start-ups can have access to programming and educational resources, meet with other entrepreneurs, find mentors, and access the venture capital firms interested in tech start-ups.
- Based in the Illinois Science and Technology park located in Skokie, the Oakton
 Community College nanotechnology education division has recently launched the
 Nanotechnology Employment, Education, and Economic Development Initiative (NE3I).
 The program will engage local high schools, provide hands on learning experiences, and
 include a certificate program.

Rationale for Retain/Revise/Complete/Delete Assessment:

Wording was revised slightly to broaden the scope of activities.

Action	Lead	Specifics	Retain/Revise/
	Implementers		Complete/Delete
Reorient philanthropic giving toward innovation		The region's foundations are a strong asset and to date have funded extensive efforts in education, arts and culture, and human services. Focusing more on the regional economy and innovation makes sense on many levels for foundations, as these are truly the catalytic investments which can help the region sustain a high level of prosperity and vitality. Foundations can work to support those groups working to organize regional initiatives	
		to organize regional initiatives and policy around a "cluster approach."	

- <u>Chicago Innovation Foundation</u> draws on philanthropic donations to fund Innovation Awards, recognizing the businesses and individuals from across the region that are developing breakthrough products and technologies.
- Area foundations are investing in innovation. For example, the MacArthur Foundation
 has made awards to the Chicago Innovation Foundation and Smart Chicago, a civic
 organization devoted to improving lives in in Chicago through technology.

Rationale for Retain/Revise/Complete/Delete Assessment:

This action remains a priority for CMAP and the region.

Action	Lead	Specifics	Retain/Revise/
	Implementers		Complete/Delete
Identify	State (DCEO),	Review and implement reforms	Retain
opportunities for	municipalities,	in existing state and local	
state and local	nonprofits	regulations, especially in areas of	
regulatory	(Chicagoland	rapidly changing technology and	
reform and	Chamber,	changes in federal regulation.	
modernize local	MEGA, World	Convene innovative companies	
ordinances	Business	to learn about potentially limiting	
	Chicago), the	local regulations or ordinances.	
	business	Provide model ordinances that	
	community	contain language about up-to-	
		date regulation and how to keep	
		it updated. Review validation,	
		information sharing, and	
		technical assistance programs for	
		new technology development	
		and implementation.	
		Recommend updates as	
		appropriate.	

• The <u>Plan for Economic Growth and Jobs</u> by World Business Chicago identifies permitting and regulations as a barrier to business growth. Firms cite costly and time consuming bureaucratic processes and regulations as barriers to innovation and commercialization. For example, the plan describes how manufacturers must interact with numerous city departments as well as their local alderman to address zoning, services, and regulation. The implementation of the plan's 10 strategies is underway and will work to address these regulatory issues.

Rationale for Retain/Revise/Complete/Delete Assessment:

• This action remains a priority for CMAP and the region.